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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/619,923

07/15/2003

Kui Yao

88493.0001

7143

26021

7590

12/28/2004

HOGAN & HARTSON L.L.P.

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EXAMINER

COLEMAN, WILLIAM D

ART UNIT

PAPER NUMBER

2823

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/619,923

Applicant(s)

YAO ET AL.

Examiner

W. David Coleman

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 18-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6 and 17 is/are rejected.
- 7) ☒ Claim(s) 4, 5 and 7-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of group I, claims 1-17 in the reply filed on October 12, 2004 is acknowledged.

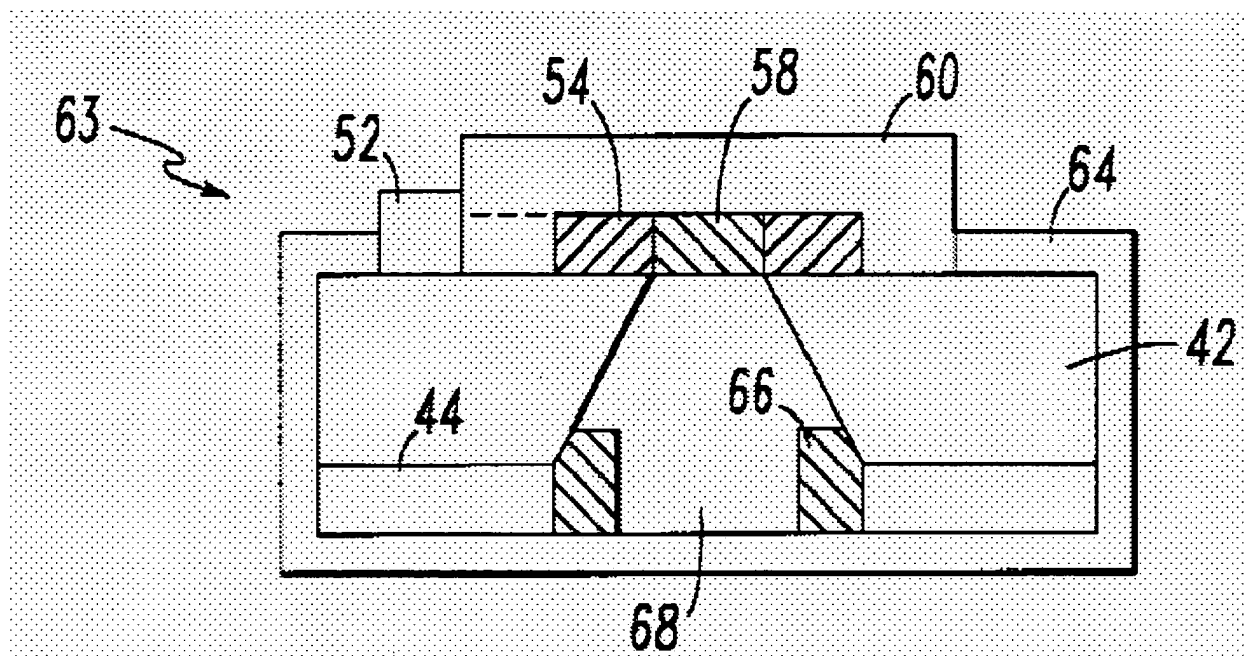
### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 3, 4, 5, 6 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Feng et al., U.S. Patent 6,265,750 B1.
4. Feng teaches a semiconductor process as claimed. See **FIGS. 1-20**, where Feng teaches the claimed invention.
5. Pertaining to claim 1, Feng teaches a method of fabricating a membrane structure for micro-machined devices, the method comprising:
  - providing a substrate **42**;
  - forming a microstructure on a back side of the substrate (the microstructure in this case is the cavity **68**);
  - depositing a precursor solution on a front side of the substrate after forming the microstructure while rotating the substrate to form a thin film layer thereon (the Examiner takes the position that since Feng discloses a spin coating process and since devices are formed on the other side of the substrate, it is well known to use precursors in the spin coating process)



6. Pertaining to claim 2, Feng teaches the method as recited in claim 1, further comprising seating a periphery portion of the substrate over a base plate to form a spacing 68 between the microstructure and the base plate 62.

7. Pertaining to claim 3, Feng teaches the method as recited in claim 2, wherein the periphery portion of the substrate is seated on a ridge projected from the base plate to form a spacing between the microstructure and the base plate.

8. Pertaining to claim 6, Feng teaches the method as recited in claim 1, further comprising, before forming of the thin film layer, depositing an intermediate layer and a first electrode layer 54 on the front side of the substrate (see the reasoning above in the rejection of claim 1).

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9. Pertaining to claim 17, Feng teaches a micro-machined device comprising:
- a substrate **42**,
  - a microstructure formed on a first side of the substrate **58**,
  - a thin film layer **44** formed on a second side of the substrate, wherein the device being formed according to a method as recited in claim 1.

### ***Objections***

10. Claims 4, 5 and 7-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to W. David Coleman whose telephone number is 571-272-1856. The examiner can normally be reached on 9:00 AM-5:00 PM.
12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 571-272-1855. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, consisting of a large, sweeping loop followed by several smaller, connected strokes.

W. David Coleman  
Primary Examiner  
Art Unit 2823

WDC